L 12

```
   SSSSSSSSSSSS  YYY         YYY     SSSSSSSSSSSS
   SSSSSSSSSSSS  YYY         YYY     SSSSSSSSSSSS
   SSSSSSSSSSSS  YYY         YYY     SSSSSSSSSSSS
SSS              YYY         YYY  SSS
SSS              YYY         YYY  SSS
SSS              YYY         YYY  SSS
SSS                 YYY   YYY     SSS
SSS                 YYY   YYY     SSS
SSS                 YYY   YYY     SSS
   SSSSSSSSS           YYY           SSSSSSSSS
   SSSSSSSSS           YYY           SSSSSSSSS
   SSSSSSSSS           YYY           SSSSSSSSS
            SSS        YYY                    SSS
            SSS        YYY                    SSS
            SSS        YYY                    SSS
            SSS        YYY                    SSS
            SSS        YYY                    SSS
            SSS        YYY                    SSS
SSSSSSSSSSSS           YYY        SSSSSSSSSSSS
SSSSSSSSSSSS           YYY        SSSSSSSSSSSS
SSSSSSSSSSSS           YYY        SSSSSSSSSSSS
```

```
_S

Ps
--

YZ

Z$

Z$

Z$

Z$

Z$

Z$

Z$

Z$

Z$

Z$

Z$

Z$
```

```
**FILE**ID**BOOPARAM                                  I  1




BBBBBBBB      OOOOOO      OOOOOO    PPPPPPPP      AAAAAA    RRRRRRRR      AAAAAA    MM      MM
BBBBBBBB      OOOOOO      OOOOOO    PPPPPPPP      AAAAAA    RRRRRRRR      AAAAAA    MM      MM
BB      BB  OO      OO  OO      OO  PP      PP  AA      AA  RR      RR  AA      AA  MMMM  MMMM
BB      BB  OO      OO  OO      OO  PP      PP  AA      AA  RR      RR  AA      AA  MMMM  MMMM
BB      BB  OO      OO  OO      OO  PP      PP  AA      AA  RR      RR  AA      AA  MM  MM  MM
BB      BB  OO      OO  OO      OO  PP      PP  AA      AA  RR      RR  AA      AA  MM  MM  MM
BBBBBBBB    OO      OO  OO      OO  PPPPPPPP    AA      AA  RRRRRRRR    AA      AA  MM      MM
BBBBBBBB    OO      OO  OO      OO  PPPPPPPP    AA      AA  RRRRRRRR    AA      AA  MM      MM
BB      BB  OO      OO  OO      OO  PP          AAAAAAAAAA  RR  RR      AAAAAAAAAA  MM      MM
BB      BB  OO      OO  OO      OO  PP          AAAAAAAAAA  RR  RR      AAAAAAAAAA  MM      MM
BB      BB  OO      OO  OO      OO  PP          AA      AA  RR    RR    AA      AA  MM      MM      ....
BB      BB  OO      OO  OO      OO  PP          AA      AA  RR    RR    AA      AA  MM      MM      ....
BBBBBBBB      OOOOOO      OOOOOO    PP          AA      AA  RR      RR  AA      AA  MM      MM      ....
BBBBBBBB      OOOOOO      OOOOOO    PP          AA      AA  RR      RR  AA      AA  MM      MM      ....


LL            IIIIII      SSSSSSSS
LL            IIIIII      SSSSSSSS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II      SS
LL              II        SSSSSS
LL              II        SSSSSS
LL              II              SS
LL              II              SS
LL              II              SS
LL              II              SS
LLLLLLLLLL    IIIIII    SSSSSSSS
LLLLLLLLLL    IIIIII    SSSSSSSS
```

```
Table of contents

    (2)       66         parameters
```

```
0000            .TITLE  BOOPARAM        SYSBOOT parameter block definition
0000            .IDENT  'V04-000'
0000
0000    ;
0000    ;*****************************************************************************
0000    ;*                                                                           *
0000    ;*  COPYRIGHT (c) 1978, 1980, 1982, 1984 BY                                  *
0000    ;*  DIGITAL EQUIPMENT CORPORATION, MAYNARD, MASSACHUSETTS.                   *
0000    ;*  ALL RIGHTS RESERVED.                                                     *
0000    ;*                                                                           *
0000    ;*  THIS SOFTWARE IS FURNISHED UNDER A LICENSE AND MAY BE USED AND COPIED    *
0000    ;*  ONLY IN  ACCORDANCE WITH  THE  TERMS  OF  SUCH  LICENSE  AND WITH THE    *
0000    ;*  INCLUSION OF THE ABOVE COPYRIGHT NOTICE. THIS SOFTWARE OR  ANY  OTHER    *
0000    ;*  COPIES THEREOF MAY NOT BE PROVIDED OR OTHERWISE MADE AVAILABLE TO ANY    *
0000    ;*  OTHER PERSON.  NO TITLE TO AND OWNERSHIP OF  THE  SOFTWARE IS  HEREBY    *
0000    ;*  TRANSFERRED.                                                             *
0000    ;*                                                                           *
0000    ;*  THE INFORMATION IN THIS SOFTWARE IS  SUBJECT TO CHANGE WITHOUT NOTICE    *
0000    ;*  AND  SHOULD  NOT  BE  CONSTRUED AS  A COMMITMENT BY DIGITAL EQUIPMENT    *
0000    ;*  CORPORATION.                                                             *
0000    ;*                                                                           *
0000    ;*  DIGITAL ASSUMES NO RESPONSIBILITY FOR THE USE  OR  RELIABILITY OF ITS    *
0000    ;*  SOFTWARE ON EQUIPMENT WHICH IS NOT SUPPLIED BY DIGITAL.                  *
0000    ;*                                                                           *
0000    ;*                                                                           *
0000    ;*****************************************************************************
0000    ;
0000
0000    ;++
0000    ; FACILITY:     System bootstrapping and initialization
0000    ;
0000    ; ABSTRACT:     Define interface between SYSBOOT and INIT for passing
0000    ;               bootstrap parameters.
0000    ;
0000    ; ENVIRONMENT:  This module is linked against SYSBOOT and against INIT; it
0000    ;               shares both of their environments.
0000    ;
0000    ; AUTHOR:  TRUDY MATTHEWS,      CREATION DATE: 07-Jan-1981
0000    ;
0000    ; MODIFIED BY:
0000    ;
0000    ;       V03-006 MMD0245         Meg Dumont,     27-Feb-1984  10:44
0000    ;               Add support for $MTACCESS installation specific accessibility
0000    ;               routine
0000    ;
0000    ;       V03-005 KTA3059         Kerbey T. Altmann       22-Jun-1983
0000    ;               Added BOO$GL_DEVNAME for boot device name.
0000    ;
0000    ;       V03-004 KDM0044         Kathleene D. Morse      03-May-1983
0000    ;               Added BOO$GL_FPEMUL and BOO$GL_VAXEMUL, for loadable
0000    ;               instruction emulation software.
0000    ;
0000    ;       V03-003 STJ3055         Steven T. Jeffreys      21-Jan-1983
0000    ;               Added BOO$GL_ERAPATLOA and BOO$GL_CHKPRTLOA for
0000    ;               loadable $ERAPAT and $CHKPRT.
0000    ;
0000    ;       V03-002 SRB0059         Steve Beckhardt         6-Jan-1983
```

```
                     0000     58 ;                Added entry for cluster loadable code.
                     0000     59 ;
                     0000     60 ;        V03-001 KTA3022         Kerbey T. Altmann          30-Dec-1982
                     0000     61 ;                Add entry for boot system node name.
                     0000     62 ;
                     0000     63 ; Equated Symbols:
                     0000     64 ;
```

```
          0000  66          .SBTTL  parameters
          0000  67 ;++
          0000  68 ; This module reserves storage for bootstrap parameters to be passed from
          0000  69 ; SYSBOOT to INIT.  In many ways, this module functions like SYSPARAM does:
          0000  70 ;         - It is linked both into SYSBOOT.EXE and SYS.EXE.
          0000  71 ;         - SYSBOOT fills in its copy of this module with derived values, then
          0000  72 ;           copies this "parameter block" into the reserved space linked into
          0000  73 ;           INIT.
          0000  74 ; This module differs from SYSPARAM in that SYSPARAM parameters stay in the
          0000  75 ; system after INIT has deleted itself;  BOOPARAM paramters are used only by
          0000  76 ; INIT and are deleted along with INIT.
          0000  77 ;--
          0000  78
          0000  79 ;
          0000  80 ; Put the data in a psect contiguous to INIT's Z$INIT000 psect, so INIT can
          0000  81 ; define a symbol unique to SYS.EXE for the base of this module.
          0000  82 ;
      00000000  83          .PSECT  Z$INIT001,LONG
          0000  84 BOO$A_BOOPARAM::                        ; Define base of module.
          0000  85
          0000  86 ;
          0000  87 ; Describe where SYSBOOT has loaded the various drivers and loadable code
          0000  88 ;
          0000  89 BOO$GL_DSKDRV::                         ; Boot device driver
00000000  0000  90          .LONG   0                       ; Address in non-paged pool
          0004  91
          0004  92 BOO$GL_SYSLOA::                         ; CPU-dependent image (SYSLOAxxx.EXE)
00000000  0004  93          .LONG   0                       ; Address in non-paged pool
          0008  94
          0008  95 BOO$GL_TRMDRV::                         ; Terminal service (TTDRIVER.EXE)
00000000  0008  96          .LONG   0                       ; Address in non-paged pool
          000C  97
          000C  98 BOO$GQ_INILOA::                         ; Pool descriptor for loadable init code.
00000000  000C  99          .LONG   0                       ; Address in non-paged pool
00000000  0010 100          .LONG   0                       ; Size in bytes (not including header).
          0014 101 BOO$GL_NPAGEDYN::
00000000  0014 102          .LONG   0                       ; Size in bytes of pool remaining
          0018 103 BOO$GL_SPLITADR::
00000020  0018 104          .BLKQ   1                       ; Address of bottom of IRP lookaside list
0000001C  0020 105 BOO$GL_IRPCNT==BOO$GL_SPLITADR+4        ; Count of IRP's to initialize
          0020 106 BOO$GL_LRPSIZE::
00000000  0020 107          .LONG   0                       ; Size in bytes of LRP packets
          0024 108 BOO$GL_LRPMIN::
00000000  0024 109          .LONG   0                       ; Minimum size to allocate an LRP
          0028 110 BOO$GL_LRPSPLIT::
00000030  0028 111          .BLKQ   1                       ; Base address of LRP lookaside list
0000002C  0030 112 BOO$GL_LRPCNT==BOO$GL_LRPSPLIT+4        ; Count of LRP's to initialize
          0030 113 BOO$GL_SRPSPLIT::
00000038  0030 114          .BLKQ   1                       ; Base address of SRP lookaside list
00000034  0038 115 BOO$GL_SRPCNT==BOO$GL_SRPSPLIT+4        ; Count of SRP's to initialize
          0038 116 BOO$GQ_FILCACHE::                       ; FIL$OPENFILE cache
00000040  0038 117          .BLKQ   1                       ; Size in bytes and pool address
          0040 118 BOO$GL_BOOTCB::                         ; Address in pool of BOOT control block
00000000  0040 119          .LONG   0                       ; with read/write virtual block logic
          0044 120 BOO$GT_TOPSYS::                         ; Top level system directory
0000004E  0044 121          .BLKB   10                      ; ASCIC string
          004E 122 BOO$GB_SYSTEMID::                       ; The 48 bit SCSsystemid of remote port
```

```
                00000054  004E   123              .BLKB   6
                          0054   124  BOO$GL_PRTDRV::                               ; Address in pool of any port driver
                00000000  0054   125              .LONG   0
                          0058   126  BOO$GL_UCODE::                                ; Address in pool of any port microcode
                00000000  0058   127              .LONG   0
                          005C   128  BOO$GL_SCSLOA::                               ; Address in pool of any SCS loadable
                00000000  005C   129              .LONG   0                         ;  code
                          0060   130  BOO$GL_CLSLOA::                               ; Address in pool of cluster loadable
                00000000  0060   131              .LONG   0                         ;  code (if loaded)
                          0064   132  BOO$GL_ERAPATLOA::                            ; Address in pool of $ERAPAT loadable
                00000000  0064   133              .LONG   0                         ;  code (if loaded)
                          0068   134  BOO$GL_CHKPRTLOA::                            ; Address in pool of $CHKPRT loadable
                00000000  0068   135              .LONG   0                         ;  code (if loaded)
                          006C   136  BOO$GL_MTACCESSLOA::                          ; Address in pool of $MTACCESS loadable
                00000000  006C   137              .LONG   0                         ;  code (if loaded)
                          0070   138  BOO$GB_NODENAME::                             ; The ASCII name of the remote system
20 20 20 20 20 20 20 20   0070   139              .ASCII  /        /
                          0078   140
                          0078   141  BOO$GL_VAXEMUL::                              ; Char/decimal ins emulator (VAXEMUL.EXE)
                00000000  0078   142              .LONG   0                         ; Address in non-paged pool
                          007C   143
                          007C   144  BOO$GL_FPEMUL::                               ; Floating point emulator (FPEMUL.EXE)
                00000000  007C   145              .LONG   0                         ; Address in non-paged pool
                          0080   146
                          0080   147  BOO$GL_DEVNAME::                              ; Boot device name in ASCII
                00000000  0080   148              .LONG   0                         ; (Zeroes if not specified)
                          0084   149
                00000084  0084   150  BOO$C_BOOPARSZ == .-BOO$A_BOOPARAM
                          0084   151              .end
```

```
BOO$A_BOOPARAM            00000000 RG     02    OP$_CVTBF   = 0000004C
BOO$C_BOOPARSZ          = 00000084  G           OP$_CVTBG   = 00004CFD
BOO$GB_NODENAME           00000070 RG     02    OP$_CVTBH   = 00006CFD
BOO$GB_SYSTEMID           0000004E RG     02    OP$_CVTDB   = 00000068
BOO$GL_BOOTCB             00000040 RG     02    OP$_CVTDF   = 00000076
BOO$GL_CHKPRTLOA          00000068 RG     02    OP$_CVTDH   = 000032FD
BOO$GL_CLSLOA             00000060 RG     02    OP$_CVTDL   = 0000006A
BOO$GL_DEVNAME            00000080 RG     02    OP$_CVTDW   = 00000069
BOO$GL_DSKDRV             00000000 RG     02    OP$_CVTFB   = 00000048
BOO$GL_ERAPATLOA          00000064 RG     02    OP$_CVTFD   = 00000056
BOO$GL_FPEMUL             0000007C RG     02    OP$_CVTFG   = 000099FD
BOO$GL_IRPCNT           = 0000001C RG     02    OP$_CVTFH   = 000098FD
BOO$GL_LRPCNT           = 0000002C RG     02    OP$_CVTFL   = 0000004A
BOO$GL_LRPMIN             00000024 RG     02    OP$_CVTFW   = 00000049
BOO$GL_LRPSIZE            00000020 RG     02    OP$_CVTGB   = 000048FD
BOO$GL_LRPSPLIT           00000028 RG     02    OP$_CVTGF   = 000033FD
BOO$GL_MTACCESSLOA        0000006C RG     02    OP$_CVTGH   = 000056FD
BOO$GL_NPAGEDYN           00000014 RG     02    OP$_CVTGL   = 00004AFD
BOO$GL_PRTDRV             00000054 RG     02    OP$_CVTGW   = 000049FD
BOO$GL_SCSLOA             0000005C RG     02    OP$_CVTHB   = 000068FD
BOO$GL_SPLITADR           00000018 RG     02    OP$_CVTHD   = 0000F7FD
BOO$GL_SRPCNT           = 00000034 RG     02    OP$_CVTHF   = 0000F6FD
BOO$GL_SRPSPLIT           00000030 RG     02    OP$_CVTHG   = 000076FD
BOO$GL_SYSLOA             00000004 RG     02    OP$_CVTHL   = 00006AFD
BOO$GL_TRMDRV             00000008 RG     02    OP$_CVTHW   = 000069FD
BOO$GL_UCODE              00000058 RG     02    OP$_CVTLD   = 0000006E
BOO$GL_VAXEMUL            00000078 RG     02    OP$_CVTLF   = 0000004E
BOO$GQ_FILCACHE           00000038 RG     02    OP$_CVTLG   = 00004EFD
BOO$GQ_INILOA             0000000C RG     02    OP$_CVTLH   = 00006EFD
BOO$GT_TOPSYS             00000044 RG     02    OP$_CVTLP   = 000000F9
OP$_ACBD                = 0000006F              OP$_CVTPL   = 00000036
OP$_ACBF                = 0000004F              OP$_CVTPS   = 00000008
OP$_ACBG                = 00004FFD              OP$_CVTPT   = 00000024
OP$_ACBH                = 00006FFD              OP$_CVTRDL  = 0000006B
OP$_ADDD2               = 00000060              OP$_CVTRFL  = 0000004B
OP$_ADDD3               = 00000061              OP$_CVTRGL  = 00004BFD
OP$_ADDF2               = 00000040              OP$_CVTRHL  = 00006BFD
OP$_ADDF3               = 00000041              OP$_CVTSP   = 00000009
OP$_ADDG2               = 000040FD              OP$_CVTTP   = 00000026
OP$_ADDG3               = 000041FD              OP$_CVTWD   = 0000006D
OP$_ADDH2               = 000060FD              OP$_CVTWF   = 0000004D
OP$_ADDH3               = 000061FD              OP$_CVTWG   = 00004DFD
OP$_ADDP4               = 00000020              OP$_CVTWH   = 00006DFD
OP$_ADDP6               = 00000021              OP$_DIVD2   = 00000066
OP$_ASHP                = 000000F8              OP$_DIVD3   = 00000067
OP$_CLRD                = 0000007C              OP$_DIVF2   = 00000046
OP$_CLRF                = 000000D4              OP$_DIVF3   = 00000047
OP$_CLRG                = 0000007C              OP$_DIVG2   = 000046FD
OP$_CLRH                = 00007CFD              OP$_DIVG3   = 000047FD
OP$_CMPD                = 00000071              OP$_DIVH2   = 000066FD
OP$_CMPF                = 00000051              OP$_DIVH3   = 000067FD
OP$_CMPG                = 000051FD              OP$_DIVP    = 00000027
OP$_CMPH                = 000071FD              OP$_EDITPC  = 00000038
OP$_CMPP3               = 00000035              OP$_EMODD   = 00000074
OP$_CMPP4               = 00000037              OP$_EMODF   = 00000054
OP$_CRC                 = 0000000B              OP$_EMODG   = 000054FD
OP$_CVTBD               = 0000006C              OP$_EMODH   = 000074FD
```

```
OP$_MATCHC                       = 00000039
OP$_MNEGD                        = 00000072
OP$_MNEGF                        = 00000052
OP$_MNEGG                        = 000052FD
OP$_MNEGH                        = 000072FD
OP$_MOVD                         = 00000070
OP$_MOVF                         = 00000050
OP$_MOVG                         = 000050FD
OP$_MOVH                         = 000070FD
OP$_MOVP                         = 00000034
OP$_MOVTC                        = 0000002E
OP$_MOVTUC                       = 0000002F
OP$_MULD2                        = 00000064
OP$_MULD3                        = 00000065
OP$_MULF2                        = 00000044
OP$_MULF3                        = 00000045
OP$_MULG2                        = 000044FD
OP$_MULG3                        = 000045FD
OP$_MULH2                        = 000064FD
OP$_MULH3                        = 000065FD
OP$_MULP                         = 00000025
OP$_POLYD                        = 00000075
OP$_POLYF                        = 00000055
OP$_POLYG                        = 000055FD
OP$_POLYH                        = 000075FD
OP$_SCANC                        = 0000002A
OP$_SKPC                         = 0000003B
OP$_SPANC                        = 0000002B
OP$_SUBD2                        = 00000062
OP$_SUBD3                        = 00000063
OP$_SUBF2                        = 00000042
OP$_SUBF3                        = 00000043
OP$_SUBG2                        = 000042FD
OP$_SUBG3                        = 000043FD
OP$_SUBH2                        = 000062FD
OP$_SUBH3                        = 000063FD
OP$_SUBP4                        = 00000022
OP$_SUBP6                        = 00000023
OP$_TSTD                         = 00000073
OP$_TSTF                         = 00000053
OP$_TSTG                         = 000053FD
OP$_TSTH                         = 000073FD

                                             +----------------+
                                             ! Psect synopsis !
                                             +----------------+

PSECT name                      Allocation          PSECT No.  Attributes
----------                      ----------          ---------  ----------
.  ABS  .                       00000000  (    0.)  00 (  0.)  NOPIC   USR   CON   ABS   LCL NOSHR NOEXE NORD   NOWRT NOVEC BYTE
$ABS$                           00000000  (    0.)  01 (  1.)  NOPIC   USR   CON   ABS   LCL NOSHR   EXE   RD     WRT NOVEC BYTE
Z$INIT001                       00000084  (  132.)  02 (  2.)  NOPIC   USR   CON   REL   LCL NOSHR   EXE   RD     WRT NOVEC LONG
```

```
                                           +---------------------------+
                                           ! Performance indicators !
                                           +---------------------------+

Phase                      Page faults   CPU Time       Elapsed Time
-----                      -----------   --------       ------------
Initialization                     37    00:00:00.07    00:00:01.21
Command processing                153    00:00:00.71    00:00:05.08
Pass 1                            342    00:00:08.44    00:00:31.84
Symbol table sort                   0    00:00:00.53    00:00:01.66
Pass 2                             46    00:00:03.09    00:00:11.44
Symbol table output                19    00:00:00.14    00:00:00.19
Psect synopsis output               2    00:00:00.02    00:00:00.02
Cross-reference output              0    00:00:00.00    00:00:00.00
Assembler run totals              601    00:00:13.00    00:00:51.44

The working set limit was 1500 pages.
35793 bytes (70 pages) of virtual memory were used to buffer the intermediate code.
There were 30 pages of symbol table space allocated to hold 391 non-local and 0 local symbols.
2903 source lines were read in Pass 1, producing 14 object records in Pass 2.
134 pages of virtual memory were used to define 133 macros.

                                          +----------------------------+
                                          ! Macro library statistics !
                                          +----------------------------+

Macro library name                          Macros defined
------------------                          --------------
_$255$DUA28:[SYS.OBJ]LIB.MLB;1                         0
_$255$DUA28:[SYSLIB]STARLET.MLB;2                      4
TOTALS (all libraries)                                 4

420 GETS were required to define 4 macros.

There were no errors, warnings or information messages.

MACRO/LIS=LIS$:BOOPARAM/OBJ=OBJ$:BOOPARAM MASD$:[EMULAT.SRC]MISSING/UPDATE=(MASD$:[EMULAT.ENH]MISSING)+MASD$:[SYS.SRC]BOOPARAM/UPDAT
```

0373 AH-BT13A-SE
VAX/VMS V4.0

DIGITAL EQUIPMENT CORPORATION
CONFIDENTIAL AND PROPRIETARY